

## CLAIMS

1. A video coding method applied to an original video sequence in which the successive frames or video object planes (VOPs) include one or several arbitrarily shaped video objects (VOs) defined in each VOP by their texture and motion components and an additional shape component, said method comprising the following steps :

(a) a non object-oriented coding step, applied to a small number of frames of the video sequence ;

10 (b) an object-oriented coding step, applied to all the frames of the sequence that follow said small number of frames ;

15 (c) a sequencing step, provided for controlling that said non object-oriented and object-oriented coding steps are respectively applied to the appropriate frames, in order to generate a coded bitstream including non object-oriented coded data corresponding to said small number of frames followed by object-oriented coded data corresponding to said following frames.

2. A coding method according to claim 1, in which said number of frames is equal to two.

20 3. A coding method according to claim 1 or 2, wherein said coded bitstream also includes an information about the number of regions of interest in the original video sequence.

4. A coding method according to claim 3, wherein said information about the number of regions of interest is given at the picture level.

25 5. A video decoding method applied to a coded bitstream corresponding to an original video sequence in which the successive frames or video object planes (VOPs) include one or several arbitrarily shaped video objects (VOs) defined in each VOP by their texture and motion components and an additional shape component and have been coded by means of a video coding method comprising the following steps :

30 (a) a non object-oriented coding step, applied to a small number of frames of the video sequence ;

(b) an object-oriented coding step, applied to all the frames of the sequence that follow said small number of frames ;

(c) a sequencing step, provided for controlling that said non object-oriented and object-oriented coding steps are respectively applied to the

appropriate frames, in order to generate a coded bitstream including non object-oriented coded data corresponding to said small number of frames followed by object-oriented coded data corresponding to said following frames ;  
said decoding method itself comprising the following steps :

5 (1) a first decoding step, applied to said non object-oriented coded data of the coded bitstream that correspond to said small number of frames of the original video sequence ;

10 (2) a spatio-temporal segmentation step applied to said non object-oriented coded data of the coded bitstream that correspond to said small number of frames and provided for reconstructing the missing shape component of the VOs ;

15 (3) a second decoding step, applied to said object-oriented coded data of the coded bitstream that correspond to said following frames ;

(4) a sequencing step, provided for controlling that said decoding and segmentation steps are respectively applied to the appropriate frames.